October 31, 2012

Hand Delivered

Mr. Bryce Bird, Director
ATTN: Mark Berger
Utah Division of Air Quality
Department of Environmental Quality
P.O. Box 144820
Salt Lake City, UT 84116

Re: Proposed Volatile Organic Compound (VOC) rules: **R307-350** (Miscellaneous Metal Parts and Products Coatings) (DAR File No. 36732); **R307-355** (Aerospace Manufacture and Rework Facilities) (DAR File No. 36737): and **R307-335** (Degreasing and Solvent Cleaning) (DAR File No. 36482)

Dear Mr. Bird:

The Utah Division of Air Quality ("UDAQ" or the "Division") has proposed control measures and emission limits for area and point sources within the Salt Lake City $PM_{2.5}$ Nonattainment Area ("SLCNAA"). ATK Launch Systems ("ATK") is providing the following information for consideration by the Division and the Utah Air Quality Board during the public comment period on the proposed State Implementation Plan ("SIP") for $PM_{2.5}$.

ATK appreciates the difficult challenges presented in crafting an attainment strategy for the $PM_{2.5}$ nonattainment areas located along the Wasatch Front given the high population density, the attendant mobile and area source emissions from that population, the industrial emission component in this area, and, of course, the challenging meteorological conditions. These challenges require UDAQ to implement all Reasonably Available Control Measures ("RACM") that are necessary to ensure that the $PM_{2.5}$ National Ambient Air Quality Standard ("NAAQS") is attained as expeditiously as practicable. The plan developed to meet attainment status should require control measures that are determined to be "reasonable" measures that will provide some discernible benefit to the attainment strategy.

ATK manufactures aerospace vehicles, propellants, explosives, pyrotechnics and conducts a variety of research, development and testing activities at its Promontory facility in Box Elder County. ATK also manufactures aerospace vehicles, propellants, explosives and conducts a variety of research, development and testing activities at its Bacchus facility in Salt Lake County. These operations involve various coating and associated solvent cleaning operations that are potentially subject to the proposed rules. We are providing specific comments on, and suggested revisions to three of the proposed rules, and then address some important applicability issues.

R307-355. Control of Emissions from Aerospace Manufacture and Rework Facilities

ATK is involved in the manufacture and rework of aerospace vehicles under contract with the National Aeronautics and Space Administration ("NASA"), the Department of Defense ("DoD") (e.g., Navy, Air Force, etc.) and for commercial entities.

1. *UDAQ should exempt space vehicle manufacture or rework operations involving solvent cleaning from the proposed aerospace rule.*

The requirements in the proposed aerospace rule derive from the National Emission Standards for Aerospace Manufacturing and Rework Facilities at 40 CFR Part 63 Subpart GG (the "Aerospace NESHAP") and the Control Techniques Guidelines ("CTG") for Control of Volatile Organic Compounds from Coating Operations at Aerospace Manufacturing and Rework Operations (EPA-453/R-97-004, December 1997) (the "Aerospace CTG"). The Aerospace NESHAP sets limits for maximum hazardous air pollutant ("HAP") and volatile organic compound ("VOC") content for topcoats, primers, maskants, clean-up solvents, and cleaning operations at certain facilities engaged in the manufacture or rework of aerospace vehicles or components. *See* 40 CFR §§ 63.744, 63.745. The Aerospace CTG recommends presumptive reasonably available control technology ("RACT") limits for VOC's, including specialty coatings which are not covered by the Aerospace NESHAP. The proposed language of R307-355 is based largely on the "model rule" set forth in Appendix B of the Aerospace CTG (the "CTG model rule").

The proposed rule, like the CTG model rule, exempts "coatings of space vehicles" from the VOC content limits for aerospace vehicle coatings. *See* Proposed R307-355-5(2) (d) and CTG model rule at B.3 (a) (2) (ii). However, in contrast to the NESHAP and the CTG model rule, proposed rule R307-355 does not also exempt solvent cleaning activities associated with space vehicle manufacture or rework. *See* 40 CFR § 63.741(h) (exempting "regulated activities associated with space vehicles" from all aspects of the Aerospace NESHAP, except for "depainting operations"), and CTG model rule, § B.1(a)(3) ("this rule does not apply to manufacturing or rework operations involving space vehicles"). ATK is proposing for consideration by the Division and the Utah Air Quality Board that the proposed rule be revised to make it consistent with the Aerospace NESHAP and CTG model rule by exempting manufacturing or rework operations involving space vehicles from all aspects of the proposed rule, including solvent cleaning.

In addition to maintaining consistency with federal standards and guidelines, the requested revision is important for reasons inherent to the manufacture of space vehicles. Manufacture of space vehicles is subject to extraordinary performance requirements to support reliability and flight safety demands. NASA and DoD space flight hardware are expected to meet the highest levels of safety and reliability. Because of the unusual

environments to which much of this hardware is exposed, achieving requisite levels of safety and reliability while meeting performance requirements is often challenging. Materials and processes currently in use have been qualified to meet the most stringent standards and are mandated by detailed NASA and DoD specifications. To change these specifications requires an extensive, time-consuming and costly testing and verification process.

This rationale also applies to solvent and cleaning materials associated with space vehicle manufacture or reworking. For example, hundreds of adhesive bonds are used in various parts of space articles. Aggressive solvents often are necessary for surface cleaning and preparation of critical bonding applications. Again, NASA and DoD specifications often dictate the types of solvents used in these applications. The proposed rule would prohibit ATK from using any cleaning solvents except those with a VOC composite vapor pressure less than or equal to 45 mm Hg or that are aqueous cleaning solvents in which water is at least 80% of the solvent as applied.[1] However, under its government contracts, ATK cannot simply change to a different type of non-specification cleaning solvent. As with coating materials, changing a specification solvent would require an extensive, time-consuming and costly testing and verification effort.

Finally, as a practical matter, the ATK space vehicle manufacturing processes are "batch operations" which use small amounts of "high VOC solvents" (vapor pressure greater than 45 mm Hg or that are not aqueous cleaning solvents in which water is at least 80% of the solvent as applied). ATK has completed a manufacturing process evaluation and has determined that there is less than one ton per year of high VOC solvents used in the space vehicle manufacturing process, and providing add-on controls as required by the rule could exceed $1,000,000 in initial facility costs. The high cost for add-on controls is primarily due to the small use of high VOC solvents in multiple work locations and buildings. Costs to replace high VOC solvents with lower VOC solvents and then qualify the process with our customers could easily exceed the facility cost to install add-on controls and would likely take two to four years to complete. For these reasons, ATK respectfully requests that the Division and the Utah Air Quality Board revise the proposed rule to conform to the Aerospace NESHAP and CTG model rule and exempt all coating *and solvent cleaning activities* associated with space vehicle manufacture or rework from the requirements of the Aerospace rule. We suggest the following language to accomplish this revision:

> **R307-355-3. Exemptions**
>
> R307-355 does not apply where cleaning and coating takes place in <u>space vehicle manufacturing</u>, research and

[1] As discussed further below, ATK interprets the "optional add-on controls" provisions of R307-355-9 not to apply to solvent cleaning operations.

> development, quality, control, laboratory testing and electronic parts and assemblies, except for cleaning and coating of completed assemblies.

2. *UDAQ should confirm that add-on controls are not required for solvent cleaning operations referenced in R307-355-8.*

ATK interprets the "optional add-on controls" provisions of R307-355-9 as not applying to solvent cleaning operations. Whereas the coating emission standards in R307-355-5 include a specific reference to R307-355-9, the solvent cleaning provisions in R305-355-8 do not, indicating that the proposed rule does not contemplate the installation and use of add-on controls for solvent cleaning operations that use high VOC solvents. This is consistent with the intent of the Aerospace CTG. *See* Aerospace CTG at 4-5 ("For solvent cleaning operations, this guidance departs from the standard presumptive RACT requirement to incorporate MACT level *controls*. … The MACT and RACT for solvent cleaning is based on *work practices* and *cleaning solvent composition*.") (emphasis added). ATK requests that UDAQ confirm this understanding.

In seeking this clarification, ATK is not suggesting that UDAQ revise the rule to allow (or require) add-on controls for solvent cleaning operations. In fact, ATK would oppose such a revision. As noted above, at the various ATK installations where solvent cleaning occurs, we estimate that the cost of installing add-on emission control devices that can attain at least 95% efficiency performance could exceed $1,000,000 in initial facility costs. This cost would be prohibitive and, given the relatively small amounts of cleaning solvents ATK uses, the cost benefit ratio for these controls would be very high. ATK respectfully requests that UDAQ clarify that the requirement for add-on controls is not applicable for solvent cleaning operations.

3. *Technical corrections in proposed rule.*

In our review of the proposed rule, we noted several technical issues that we believe should be corrected or clarified. ATK offers the following technical suggestions:

- Consistent with our comments above, and to facilitate implementation of the rule, ATK believes that UDAQ should add the definition of "space vehicle" in section R307-355-4 of the rule:

> "Space vehicle" means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment

> associated with test, transport, and storage, that through contamination can compromise the space vehicle performance.

- Section R307-355-4 of the proposed rule incorporates by reference the definition of "specialty coating" from 40 CFR 63 subpart GG, Appendix A. However, Appendix A does not include a definition for the individual term "specialty coating"; rather, it consists of a set of "specialty coating definitions." We suggest that UDAQ revise this definition as follows:

> "Specialty coating" means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection. Individual specialty coatings are defined in appendix A to 40 CFR 63 subpart GG, ~~specialty coating as defined in 40 CFR 63 subpart GG, Appendix A,~~ which is incorporated by reference.

- Because of a syntax issue, the emission standards in subsection R307-355-5(1) are inconsistent with the Aerospace model rule. Under the model rule, owners or operators that do not comply with *any* of the coating content requirements (i.e., VOC content limits for primers, topcoats, or specialty coatings) may comply with the rule by installing optional add-on controls. *See* Aerospace model rule, § B.3 (d) (1). In contrast, under proposed subsection R307-355-5(1)(c), the add-on controls option is available only with respect to specialty coatings – i.e., given the syntax of the rule, the phrase granting the add-on controls option ("or shall use an add-on device as specified in R307-355-9") applies only to specialty coatings in subsection R307-355-5(1)(c). We suggest that UDAQ correct this by deleting the optional phrase in subsection R307-355-5(1)(c) and adding it to a new subsection (d), as follows:

> (c) Each owner or operator shall not apply specialty coatings with a VOC content in excess of the amounts specified in the VOC Content Limits for Specialty Coatings table in EPA-453/R-97-004,

December 1997, ~~page B-2,~~ hereby incorporated by reference ~~or shall use an add-on control device as specified in R307-355-9~~.

(d) Each owner or operator may comply with the provisions of R307-355-5(1) (a) through (c) by using an add-on control device as specified in R307-355-9.

- Subsection R307-355-7(4) requires the owner or operator to maintain records of "coatings listed in Table 1 with coating usage on an annual basis." However, the rule does not include any "Table 1." Based on the model rule, this recordkeeping requirement applies to the VOC-containing primers, topcoats, and specialty coatings for which limits are specified. *See* Aerospace model rule, § B.4 (a). We suggest UDAQ revise subsection R307-355-7(4) as follows:

(c) The owner or operator shall maintain records of coatings listed in ~~Table 1~~ R307-355-5(1) (c) with coating usage on an annual basis.

- We suggest that UDAQ correct the typo in subsection R307-355-8(1), as follows:

(1) Hand-wipe cleaning. Cleaning solvents used in hand-wipe cleaning operations shall have a VOC composite vapor pressure less than or equal to 45 mm Hg ~~or less~~ at 68 degrees Fahrenheit or an aqueous cleaning solvent in which water is at least 80% of the solvent as applied.

R307-350. Miscellaneous Metal Parts and Products Coatings

1. *UDAQ should exempt the surface coating of military munitions from the scope of this rule.*

The proposed miscellaneous metal parts and products coatings rule applies to certain industrial categories that coat metal parts or products, including fabricated metal products. ATK understands that UDAQ views the fabricated metal products category as a general "catch-all" that may encompass surface coating of military munitions, including flare manufacturing. These operations involve the application of specification coatings to munitions manufactured for the DoD. For the reasons discussed below, ATK respectfully

requests that the Division and the Utah Air Quality Board exempt from this rule the surface coating of military munitions, including flares,[2] manufactured by or for the Armed Forces.

EPA has adopted a NESHAP for surface coating of miscellaneous metal parts and products. During development of the rule, EPA received a number of comments related to the applicability of these requirements to DoD. These commenters requested that EPA exempt DoD surface coating operations, including those associated with DoD munitions manufacturing, from the rule:

> The commenter (IV-D-33) also requested that EPA exempt Department of Defense munitions (as defined in 40 CFR 260.10) manufacturing from all surface coating NESHAP for several reasons: munitions have unique coating specifications that relate directly to performance and safety (several examples were provided); developing and qualifying compliant coatings, if possible, would require more time than allowed under the Clean Air Act (i.e., greater than 3 years); and frequent changes in the mix of munitions that are produced that are unpredictable and dictated by world events would prevent compliance using either the averaging or add-on control options.

National Emission Standards for Hazardous Air Pollutants (NESHAP): Surface Coating of Miscellaneous Metal Parts and Products – Summary of Public Comments and Responses on Proposed Rule, EPA-453/R-03-008, August 2003, at p. 25 ("Response to Comments Document"). EPA agreed that DoD surface coating operations should be exempt from the miscellaneous metals parts NESHAP. *See id.* at 25-26. Consequently, EPA exempted "the surface coating of military munitions manufactured by or for the Armed Forces of the United States" from the scope of the miscellaneous metal parts NESHAP. *See* 40 CFR § 63.3881(c)(4).

For these same reasons, ATK respectfully requests that the Division and the Utah Air Quality Board exempt surface coating of military munitions, including flare manufacturing, from the scope of the proposed miscellaneous metal parts and products coatings rule. The coatings used in manufacturing military munitions are dictated by military specifications that relate directly to performance and safety. Also, developing and qualifying compliant coatings (i.e., changing a specification coating) is a difficult, expensive and time-consuming process that can take years to complete. The Department of Defense programs require that munitions manufacturing be conducted on a defined schedule. The time needed to qualify

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[2] The term "military munitions" includes "pyrotechnics," which includes flares. *See* 40 CFR § 260.10.

alternative coatings could compromise ATK's ability to guarantee adherence to such scheduling, and its ability to secure future military contracts.

Moreover, as a practical matter, ATK uses relatively small amounts of coatings that would exceed the VOC limits in Table 1 of the proposed rule. ATK has completed a manufacturing process evaluation and has determined that there is less than one ton per year of coatings with VOC content that exceed limits in Table 1, and providing add-on controls as required by the rule could exceed $400,000 in initial facility costs. Costs to replace the coatings with lower VOC coatings and then qualify the process with our customers could easily exceed the facility cost to install add-on controls, and would likely take more than two years to complete. For these reasons, ATK respectfully requests that the Division and the Utah Air Quality Board revise the proposed rule to conform to the miscellaneous metals parts NESHAP and exempt from the scope of the rule surface coating of military munitions manufactured by or for the Armed Forces. We suggest the following language to accomplish this revision:

> **R307-350-3. Exemptions**
>
> (1) The requirements of R307-350 do not apply to the following:
>
> * * *
>
> (g) The surface coating of military munitions manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State).

2. *Technical corrections in proposed rule.*

- We also suggest the following revisions to the applicability section in R307-350-2:

> (1) R307-350 applies to each source that applies coatings to miscellaneous metal parts and products ~~coating operations~~, including …

Applicability Issues

1. *UDAQ should* exempt *surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building and facility maintenance operations from the requirements of R307-350.*

To be consistent with the Miscellaneous Metal Parts NESHAP, ATK respectfully requests that the Division and the Utah Air Quality Board revise the proposed rule and exempt

surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building and facility maintenance operations from the requirements of R307-350from the requirements of R307-350. The modification will define the scope of the regulation, and will prevent applying the rule to operations that are not manufacturing operations. We suggest the following language to accomplish this revision:

R307-350-3. Applicability

(1)The requirements of R307-350 do not apply to the following:

***

(g) Surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building and facility maintenance operations.

2. *UDAQ should exempt research and development, quality control, laboratory testing, electronic parts assembly, aerospace manufacturing and reworking, and military munitions manufacturing from the requirements of R307-335.*

ATK understands that the formal public comment period for rule R307-335 (Degreasing and Solvent Cleaning) has expired; however, we also understand that the final rule has not been published. As we have evaluated the potential impact of this rule on our facilities, it appears the rule would, on its face, regulate solvent emissions from research and development, quality control, laboratory testing, and electronic parts assembly activities.

Emissions from these operations are insignificant, and would require significant facility costs for add-on controls. The Aerospace NESHAP exempts research and development, quality control, laboratory testing, and electronic parts assembly activities from regulation. R307-335 could also apply to munitions manufacturing activities. VOC emissions from degreasing and cleaning in munitions manufacturing are far lower than VOC emissions coating operations. The price for add-on controls in munitions manufacturing was provided in the previous section. Based on the high cost for add-on controls and negligible benefit, ATK respectfully requests that the Division and the Utah Air Quality Board revise the proposed rule and exempt *research and development, quality control, laboratory testing, electronic parts assembly and reworking, and military munitions manufacturing* from the requirements of R307-335. We suggest the following language to accomplish this revision:

R307-335-2. Applicability

(1) R307-335 applies to all degreasing or solvent cleaning operations that use VOCs and that are located in Box Elder, Cache, Davis, Salt Lake, Tooele, Utah and Weber Counties.

(2) R307-335 does not apply where degreasing and solvent cleaning takes place in research and development, quality control, laboratory testing, electronic parts assembly, and military munitions manufacturing.

3. *UDAQ should clarify that the VOC rules are mutually exclusive, and that functions that support the aerospace business such as research and development, quality control, laboratory testing, electronic parts assembly and facility maintenance are regulated by R307-355.*

The VOC rules discussed above could potentially be interpreted to have overlapping applicability. For example, industrial solvent cleaning activities associated with aerospace operations, covered under R307-355-8, might also be considered to be subject to the industrial solvent cleaning requirements of R307-335-7. However, the standards applicable under each rule conflict with each other. *Compare* R307-335-7 (specifying a maximum VOC vapor pressure of 8 mm Hg) with R307-355-8 (specifying a maximum VOC vapor pressure of 45 mm Hg). Also, applying both sets of rules would be contrary to EPA's intent in developing CTGs for separate source categories. Each of the relevant CTGs includes language clarifying that the requirements of each are mutually exclusive with the requirements of other CTGs.

In particular, the Aerospace CTG includes the following statements clarifying the relationship between operations covered by that CTG and other CTGs designed to limit VOC emissions:

> This CTG is intended to supersede any potential applicability of the Miscellaneous Metal Part and Products CTG (RACT) requirements for manufacturing and rework operations of aerospace vehicles and components. *(Aerospace CTG at 1-1.)*
>
> The operations covered by this CTG shall not be subject to another CTG. The *operations and applications exempted under this CTG* shall not be subject to another CTG. *(Id. at 4-1)(emphasis added)*

Similarly, the Miscellaneous Metal and Plastic Parts Coatings CTG includes the following passage:

> In a Federal Register notice, EPA stated that the cleaning operations associated with certain specified section 183(e) consumer and commercial product categories, including the miscellaneous metal product coating category and plastic part coating category, would not be covered by EPA's 2006 CTG for industrial cleaning solvents (71 FR 44522 and 44540, August 4, 2006). In the notice, EPA expressed its intention to address cleaning operations associated with these categories in the CTGs for these specified categories if the Agency determines that a CTG is appropriate for the respective categories. Accordingly, this CTG addresses VOC emissions from cleaning operations associated [with] the miscellaneous metal product coating category and the plastic part coating category.

Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008, at p. 11 (note h). Finally, the CTG for industrial cleaning solvents includes the following recommendation:

> We recommend that the States exclude from applicability those cleaning operations in the following categories listed for regulation under CAA section 183(e):
>
> 1 Aerospace coatings;
>
> * * *
>
> 12 Miscellaneous metals parts coatings;
>
> * * *

Control Techniques Guidelines: Industrial Cleaning Solvents, EPA-453/R-06-001, September 2006, at pp. 8-9.

Notwithstanding the EPA's clear intent that the regulations should not overlap, the proposed VOC rules for the various source categories lack language clarifying that their requirements do not overlap. For example, the Aerospace rule should clarify that operations and applications covered by, or exempted under, that rule are not subject to other VOC rules. The same language should be included in the miscellaneous metal parts and products coating rule, the degreasing and solvent cleaning rule (as suggested above), and other rules addressing RACT requirements for VOCs. We suggest language similar to the following to accomplish this:

R307-355-2. Applicability

(1) R307-355 applies to all aerospace manufacture and rework facilities that have the potential to emit five tons or more per year of VOCs * * *

(2) Aerospace manufacture and rework facilities that are covered by this rule, that would be covered if they had a potential to emit five tons or more per year of VOCs, or that are exempted from its requirements under R307-355-3, are not subject to the VOC requirements in R307-335 and R307-350.

ATK respectfully requests that UDAQ add similar language to each of the individual VOC rules. At a minimum, we request that UDAQ clarify in its response to comments that the various rules do not overlap.

Summary of Comments and Proposed Changes

ATK respectfully requests that the Division and the Utah Air Quality Board consider the following comments and suggested changes to the proposed VOC rules:

- Based on a similar exemption in the Aerospace NESHAP and CTG, exempt both coatings and solvent cleaning of space vehicles from the Aerospace rule.
- Confirm that the optional add-on controls referenced in R307-355-9 are not required for solvent cleaning operations referenced in R307-355-8.
- Based on a similar exemption in the Miscellaneous Metal Parts NESHAP, exempt the surface coating of military munitions from the Miscellaneous Metal Parts rule.
- Based on a similar exemption in the Miscellaneous Metal Parts NESHAP, exempt surface coating operations that occur at research or laboratory facilities, or is part of janitorial, building and facility maintenance operations from the requirements R307-350.
- It is proposed to use a similar exemption contained in the Aerospace NESHAP, to exempt research and development, quality control, laboratory testing, electronic parts assembly, aerospace manufacturing and reworking, and military munitions manufacturing from the requirements of R307-335.

- Confirm that the VOC rules are mutually exclusive, and that functions that support the aerospace business such as research and development, quality control, laboratory testing, electronic parts assembly and facility maintenance are regulated by the Aerospace rule at R307-355.

- Suggestions for technical corrections to proposed rules are also provided.

Thank you for your consideration of these comments. ATK is appreciative of the opportunity to participate in the development of the VOC rules. Please contact me at (801)251-4643 or George Gooch at (801)699-0319, if clarification on any of these comments is needed.

Sincerely,

Robert Ingersoll, Director
Environmental Services

Cc: Box Elder County Commission